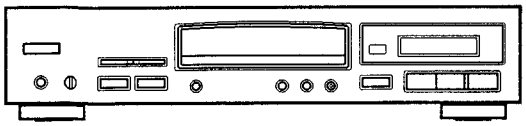
TEAC



SERVICE MANUAL

CD-P1100

Compact Disc Player

COMPACT disc DIGITAL AUDIO

Effective : February 1996

D002○400A

1 SPECIFICATIONS

Pickup: 3-beam, semiconductor laser
Encoding: 16-bit linear
Frequency Response: 5 – 20,000 Hz ± 1 dB
Total Harmonic Distortion: < 0.03 % (1 kHz)
Signal to Noise Ratio: > 100 dB
Channel Separation: > 85 dB (1 kHz)
Wow and Flutter: Below measurable limit
Power Requirements:
120 V AC, 60 Hz (U.S.A. Model)
230 V AC, 50 Hz (U.K./Europe Model)
120/230 V AC, 50 – 60 Hz
(General Export Model)
240 V AC, 50 Hz (Australia Model)
Power Consumption: 15 watts
Dimensions (W×H×D):
435 × 80 × 280 mm
(17-1/8″ × 3-1/8″ × 11″)
Weight (net): 4.0 kg

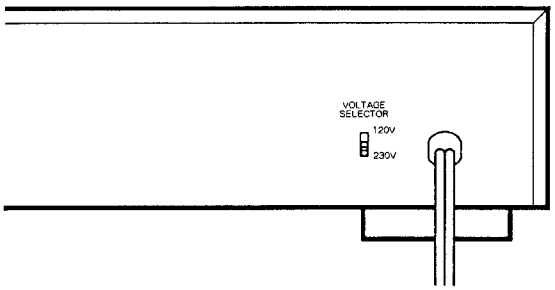
● Improvements may result in specification or feature changes without notice.

VOLTAGE CONVERSION

(For general export models)

Be sure to remove the power cord from the AC outlet before repositioning the voltage converter switch.

1. Locate the voltage selector on the rear panel.
2. Using a flat-bladed screwdriver, set to the appropriate 230 V or 120 V position according to your area.

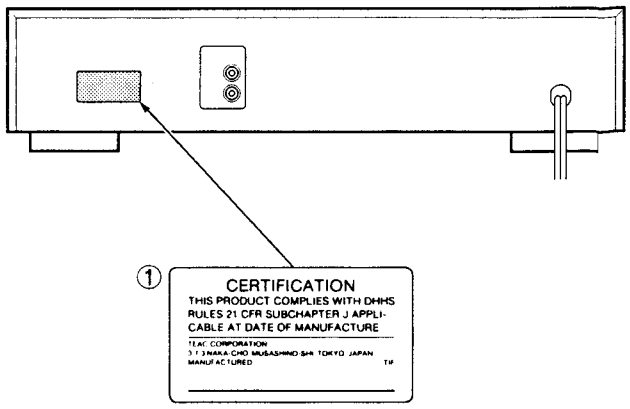


SAFETY INFORMATION

This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as class 1 laser product. There is not hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings.
The label required in this regulation is shown ①.

CAUTION

USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.


①
CERTIFICATION
THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR SUBCHAPTER J APPLICABLE AT DATE OF MANUFACTURE
TEAC CORPORATION
MANUFACTURED

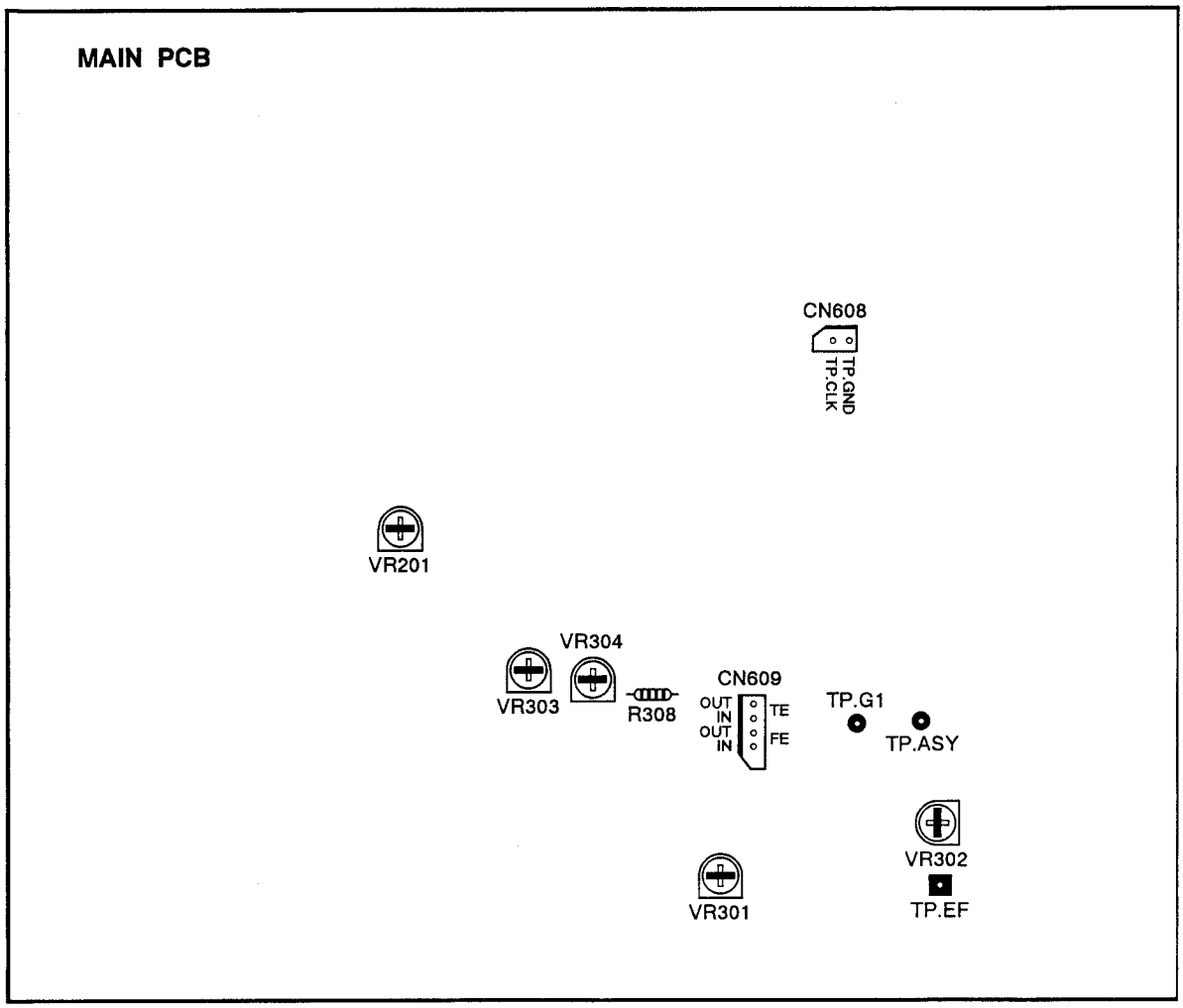
Optical pickup:
Type : SF-91P
Manufacturer : SANYO Electric CO., Ltd.
Laser output : Less than 0.5 mW on the objective lens
Wavelength : 765 – 815 nm

2 ADJUSTMENT AND CHECKS

2-1 SERVO ADJUSTMENT

Reference Disc for adjustments : Sony YEDS-18

Adjustments and Test Points



Testing Equipment

- 5020 Frequency Response Analyzer (NF Electronic Instrument)
- Frequency Counter (Goldstar)
- PM3365A Digital Storage Oscilloscope (Philips)

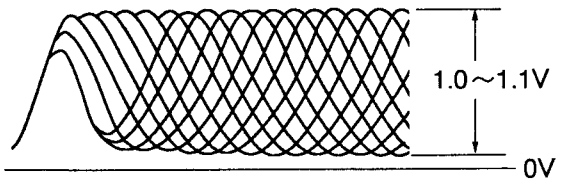
Procedure

(A) VCO Free Run Frequency Adjustment

1. Turn power on without loading a disc.
2. Connect frequency counter probe to **TP. CLK** and **TP. GND**.
3. Short **TP. ASY** to **TP. G1**.
4. Adjust **VR201** so that the frequency counter reads **4.32 ± 0.02MHz**. (adjust in STOP mode)
5. Disconnect **TP. ASY** to **TP. G1**.

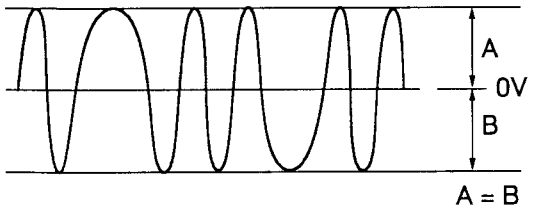
(B) Focus Bias Adjustment

1. Connect Jitter Meter probe to **TP. EF** and **TP. G1** under PLAY mode.
2. Adjust **VR302** until Jitter Meter get the minimum point.
3. Connect Oscilloscope same as the Jitter Meter. Waveform will be read as diamond shape (see the figure below).



(C) E-F Balance Adjustment

1. Connect Oscilloscope probe to **CN609 TE** and **TP. G1** under PLAY mode.
2. Adjust **VR304** fully counter clockwise.
3. Adjust **VR301** so that the waveform is same as following picture shows (A = B).



4. Set **VR304** back to the place it was before adjustment.

(D) Focus Error Gain Adjustment

1. Set Servo Analyzer at 1.4kHz of frequency and 30mV of voltage.
2. Connect Servo Analyzer probe to **CN609. FE. IN** and **CN609 FE. OUT** under PLAY mode.
3. Adjust **VR303** to achieve 0dB loop-gain between CH1 and CH2.

(E) Tracking Error Gain Adjustment

1. Set Servo Analyzer at 1.4kHz of frequency and 30mV of voltage.
2. Connect Servo Analyzer probe to **both ENDS** of **R308** under PLAY mode.
3. Adjust **VR304** to achieve 0dB loop-gain between CH1 and CH2.

2-2 AUDIO CHARACTERISTICS TEST

Reference Disc for adjustments : Sony YEDS-18

Testing Equipment

- 3346 CD Player Evaluating Filter × 2 (NF Electronic Instrument)
- VP-7722A Panasonic Audio Analyzer

Equipment Set-up

1. The Audio output of the testing CD player are connected to the CD filter L & R inputs.
2. The outputs from the filter are connected to the Audio Analyzer.

Procedure

(A) Check the Output Voltage

1. Set the mode of the filter to "THRU".
2. Then, the mode of Audio Analyzer is set to "LEVEL".
3. Select the track 2 of the test disc and run it under "PLAY" mode.
4. The output voltage and gain of the R & L channels are taken by pressing the respective buttons on the control board.
5. The result should be within the range of **1.8 ± 0.1V**.

(B) The Frequency Response

1. The mode of the CD filter and audio analyzer are kept unchanged.
2. Select the tracks 3, 4, 5 & 6 of the test disc and run it under "PLAY" mode.
3. Check the output of the R & L channels.
4. The acceptable frequency response is **± 1.0dB** tolerance to the level at 1kHz in the range from 20Hz to 20kHz.

(C) Total Harmonic Distortion

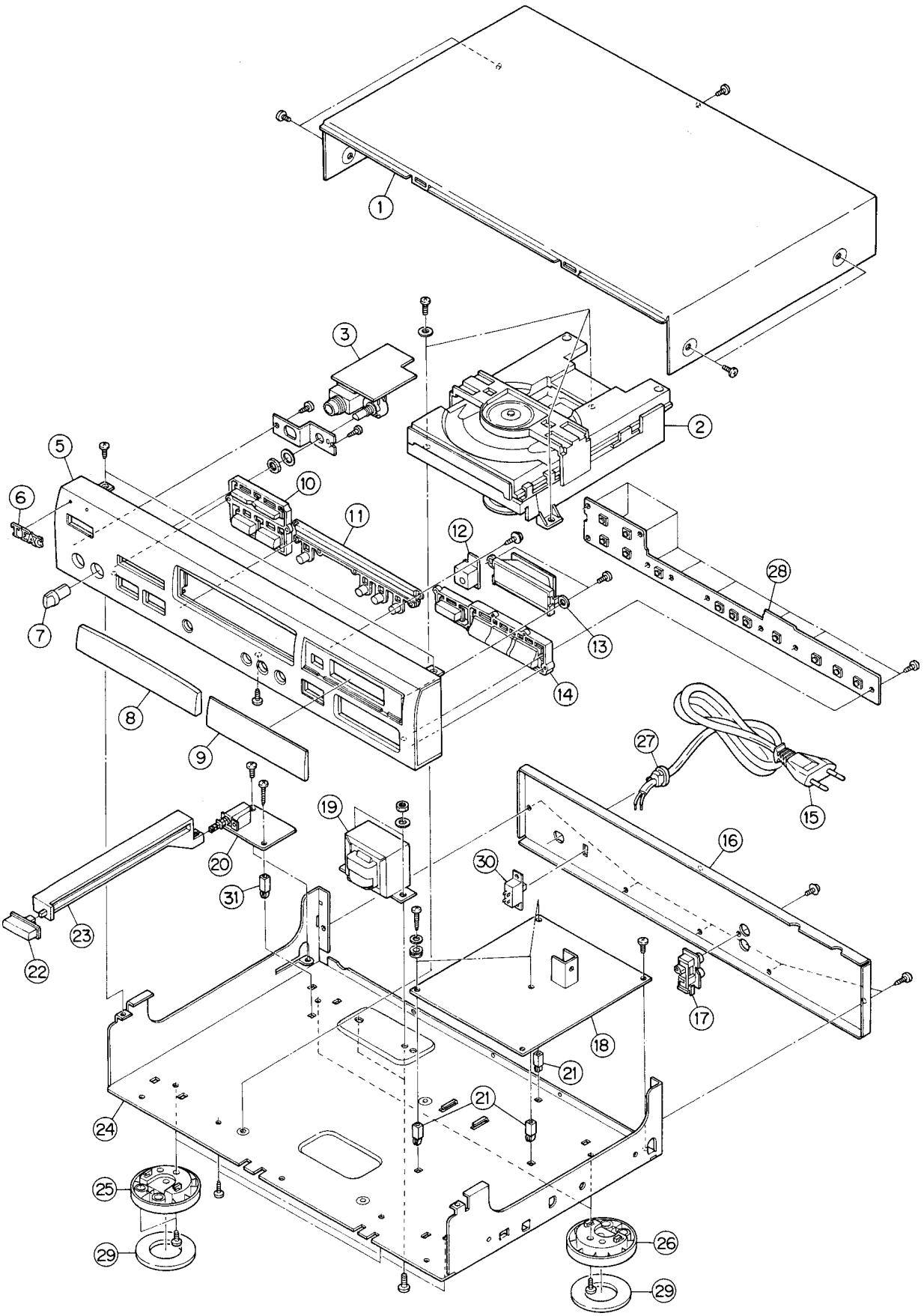
1. The mode of the filter is changed to "DIST/CH-SP" mode.
2. Audio Analyzer is now set to "DIST" mode by pressing the suitable button on the control board.
3. Set the unit of the audio analyzer to "%" mode.
4. Select the tracks 2, 4 & 5 on the test disc and run them under "PLAY" mode.
5. Check the % of each R & L channels.
6. The display should not be greater than **0.08%**.

PARTS LIST SECTION

NOTES

- PC boards shown are viewed from parts side.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [US]:U.S.A. [C]:CANADA [GE]:GENERAL EXPORT [E]:EUROPE
  [UK]:U.K. [A]:AUSTRALIA [SA]:SOUTH AMERICA

3 EXPLODED VIEWS AND PARTS LIST



EXPLODED VIEW

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1	9A05796300	TOP CABINET, PAINTED	
2	9A05804400	MECH. ASSY, PU91TL-001	
2-1	9A05787900	OPTICAL PICK UP	
2-2	9A05822800	MOTOR, RF-310T-11400(10.9)	
2-3	9A05822900	MOTOR, RF-310T-11400(19.7)	
2-4	9A05822700	MOTOR, 12V FR-500TB-12560	
3	9A05820000	HEADPHONE BOARD ASSY	
5	9A05793100	FRONT PANEL, PAINTED	
6	9A05794100	TEAC BADGE	
7	9A05793000	KNOB, VOLUME	
8	9A05793300	TRAY COVER, PAINTED	
9	9A05793400	LENS, PAINTED	
10	9A05793200	KNOB, SEARCH & SKIP, PAINTED	
11	9A05793500	KNOB COVER/REPEAT, PAINTED	
12	9A05820800	SENSOR BOARD UNIT, REV B	
13	9A05820600	LCD UNIT(R-), REV B	
14	9A05793600	FUNCTION KNOB, PAINTED	
15	⚠ 9A05823800	AC CORD, UL [US, GE]	
	⚠ 9A05821200	AC CORD, SPT-1 [US, C]	
	⚠ 9A05824700	AC CORD, VDE [SA, E]	
	⚠ 9A05825200	AC CORD, BSI FUSE 3A [UK]	
	⚠ 9A05825300	AC CORD, SAA [A]	
16	9A05825600	REAR CABINET [A]	
	9A05796500	REAR CABINET [E, UK]	
	9A05822300	REAR CABINET [US, C, SA]	
	9A05824200	REAR CABINET [US, GE]	
17	9A05785500	RCA SOCKET	
18	9A05821600	MAIN BOARD ASSY, REV B	
19	⚠ 9A05788300	TRANSFORMER, 230V [SA, E, UK]	
	⚠ 9A05821300	TRANSFORMER, 117V [US, C]	
	⚠ 9A05824000	TRANSFORMER, 120/230V [US, GE]	
	⚠ 9A05825400	TRANSFORMER, 240V [A]	
20	----------	POWER BOARD ASSY	
21	9A05795600	CD90 PCB MOUNT(STAND OFF)	
22	9A05792800	KNOB, POWER	
23	9A05792900	POWER BAR [US, C, SA, A]	
	9A05824100	POWER BAR [US, GE, E, UK]	
24	9A05796400	BOTTOM CABINET	
25	9A05793700	LEG, TEAC	
26	9A05793800	LEG, TEAC	
27	⚠ 9A05799800	AC CORD STOPPER	
28	9A05820200	CONTROL BOARD ASSY, REV B	
29	9A05822400	RUBBER PAD	
30	⚠ 9A05823700	AC VOLTAGE SEL, 2P2T [US, GE]	
31	9A05795700	CD90 PCB MOUNT(STAND OFF)	

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	9A05481000	OWNER'S MNL, 5MULT	
	9A05804800	REMOTE UNIT, RT-01	
	9A05787700	1M AUDIO CABLE	

4 PC BOARDS AND PARTS LIST

CONTROL BOARD ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		9A05820200	CONTROL BOARD ASSY, REV B
		9A05820300	CONTROL BOARD, REV A
D1-10		9A05784300	DIODE, 1N4148
S1-12		9A05785600	TACT SW, 2P2T KPT-1105A

MAIN BOARD ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		9A05821600	MAIN BOARD ASSY, REV B
		9A05790200	MAIN PC BOARD
		9A05796600	HEAT SINK
		9A05785500	RCA SOCKET
		9A05787200	6PIN 200MM FLAT CABLE
CN101, 102		9A05784700	STRAIGHT CONN. WAFER, 3P
CN502, 602		9A05784700	STRAIGHT CONN. WAFER, 3P
CN603, 604		9A05785300	STRAIGHT CONN. WAFER, 8P
CN605		9A05785200	STRAIGHT CONN. WAFER, 7P
CN606		9A05785300	STRAIGHT CONN. WAFER, 8P
CN607		9A05784900	STRAIGHT CONN. WAFER, 4P
C103, 104	⚠	9A05782000	C, ELECT 2200UF/16V
D301		9A05784300	DIODE, 1N4148
IC101	⚠	9A05789400	IC, MC7805C
IC102	⚠	9A05789500	IC, MC79L05ACZ
IC201		9A05789600	IC, KA8309B
IC301		9A05789700	IC, KA920-1D
IC401		9A05821900	IC, KS9211
IC501		9A05788700	IC, KDA0316LN
IC502, 503		9A05788800	IC, MC4558S
IC601		9A05789000	IC, KS56C820-T5
PD3-6	⚠	9A05784200	DIODE, 1N4001
PD606		9A05784200	DIODE, 1N4001
PD801, 802		9A05784200	DIODE, 1N4001
Q201		9A05783400	TR, KSD882-Y
Q202		9A05783900	TR, KS772-Y
Q204, 206		9A05784000	TR, KSA931-Y
Q205, 203		9A05783200	TR, KSC2331-Y
Q207		9A05783000	TR, KSR1007
Q208		9A05783100	TR, KSC1008-Y
Q209		9A05783800	TR, KSA708-Y
Q301		9A05783700	TR, KSB564A-Y
Q500-504		9A05783500	TR, KSC945-Y
Q505		9A05782900	TR, KSR1003
Q506, 507		9A05783600	TR, KSR2003
Q601		9A05783500	TR, KSC945-Y
Q901, 902		9A05784000	TR, KSA931-Y
Q903, 904		9A05783500	TR, KSC945-Y
R101, 102	⚠	9A05778700	R, METAL FUSIBLE 2.2 1/4W
VR201		9A05778800	VR, SEMI-FIXED 2K
VR301-304		9A05778900	VR, SEMI-FIXED 20K
X401		9A05784500	CRYSTAL, 16.9344 +-30PPM
ZD801		9A05784400	ZENER DIODE, 5.6V 0.5W
ZD803-805		9A05784300	DIODE, 1N4148

HEADPHONE BOARD ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	9A05820000	HEADPHONE BOARD ASSY
	9A05790000	HEADPHONE PC BOARD, PCB-00
J1, 2	9A05784800	RIGHT ANGLE CONN. WAFER, 3P
PJ1	9A05820100	6.4MM HEADPHONE JACK
U1	9A05788900	IC, C4558C
VR1	9A05779000	VR, 50K 1/4W

POWER BOARD ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		----------	POWER BOARD ASSY
		9A05821500	POWER PC BOARD, REV B
	⚠	9A05779300	C, CERAMIC 0.01UF/400VA
	⚠	9A05785700	POWER SW, 1P1T 250V/4A/TV3
		9A05821400	EC-TERMINAL
		9A05798900	EYELET, 2.3X4MM

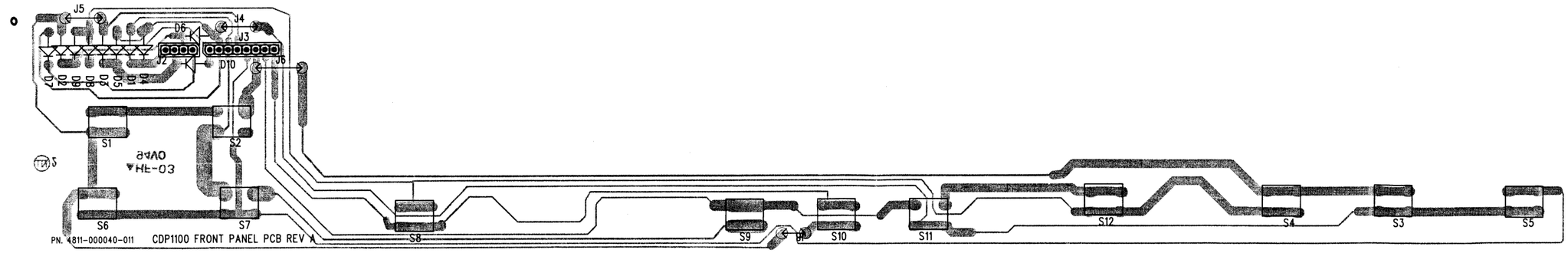
LCD UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	9A05820600	LCD UNIT(R-), REV B
	9A05790100	LAMP PC BOARD, PCB-006-02
	9A05788100	BACKLIT BULB, 8V 40MA
	9A05788200	LCD, AT-011P-BS-3
	9A05820700	COLOR DIFFUSION SHEET
	9A05794000	CD362 LAMP BLOCK
	9A05798800	CD362L01 COLLAR

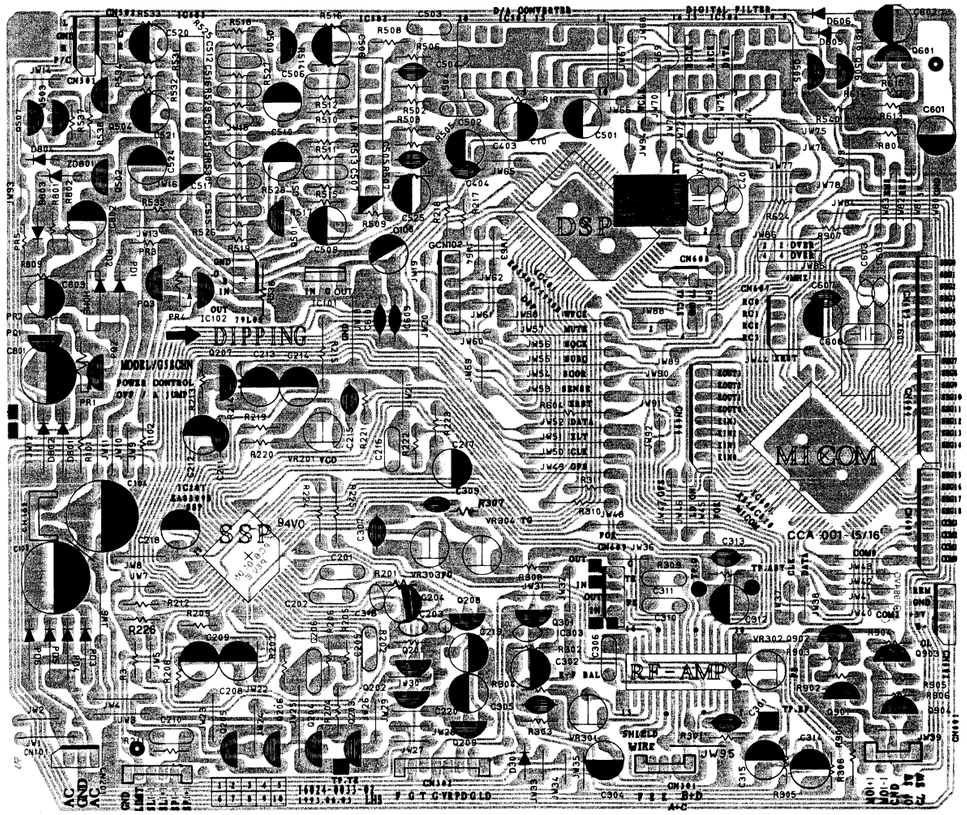
SENSOR BOARD UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	9A05820800	SENSOR BOARD UNIT, REV B
	9A05820900	REMOTE SENSOR BOARD
	9A05787800	INFRARED SENSOR, SBX1610-5

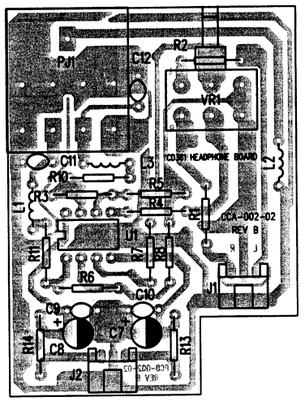
CONTROL PCB



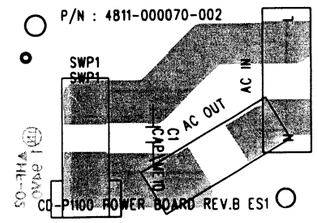
MAIN PCB



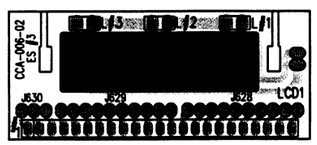
HEADPHONE PCB



POWER PCB

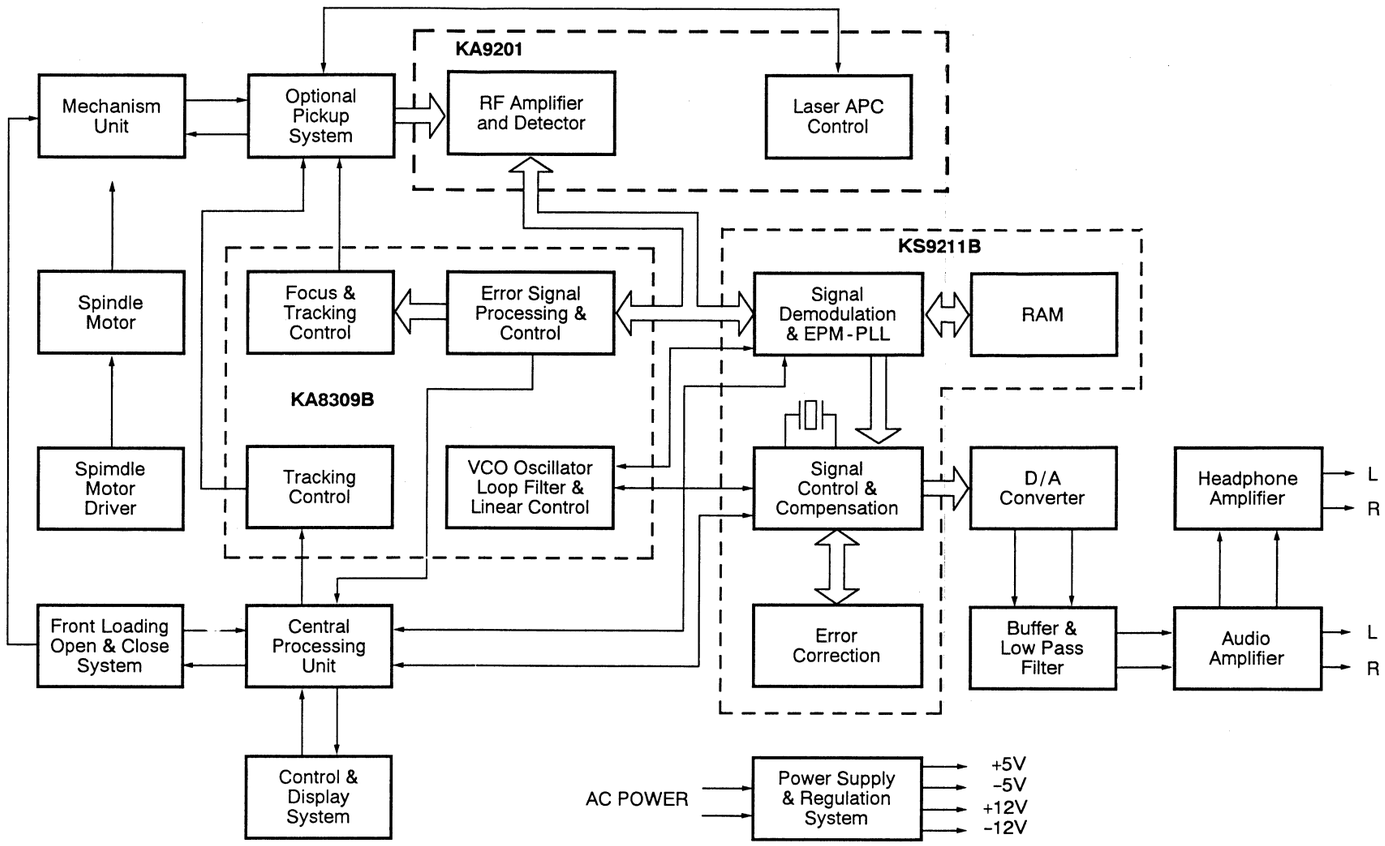


LAMP PCB

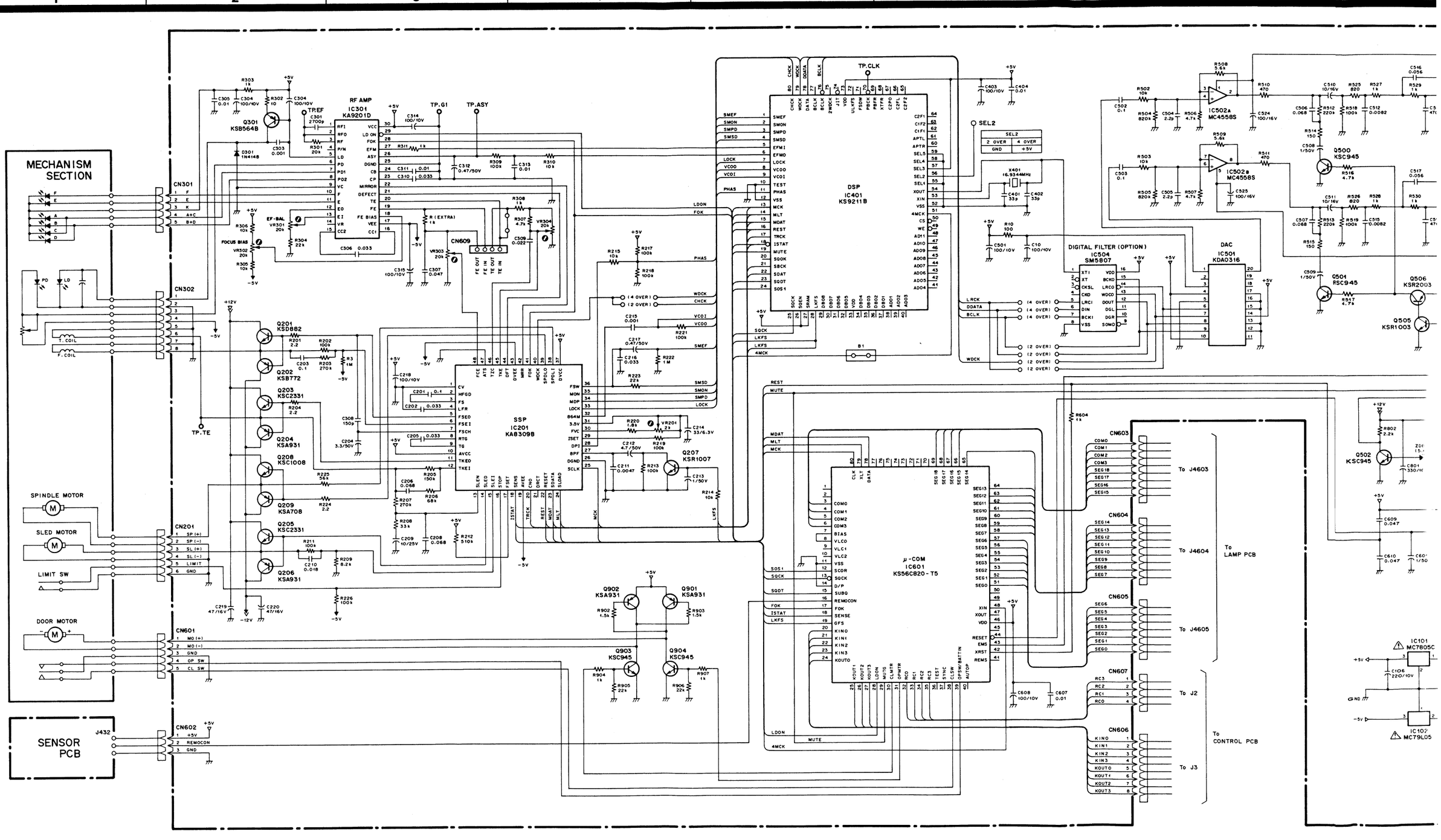


SENSOR PCB

5 BLOCK DIAGRAM



TEAC SCHEMATIC DIAGRAM CD-P1100

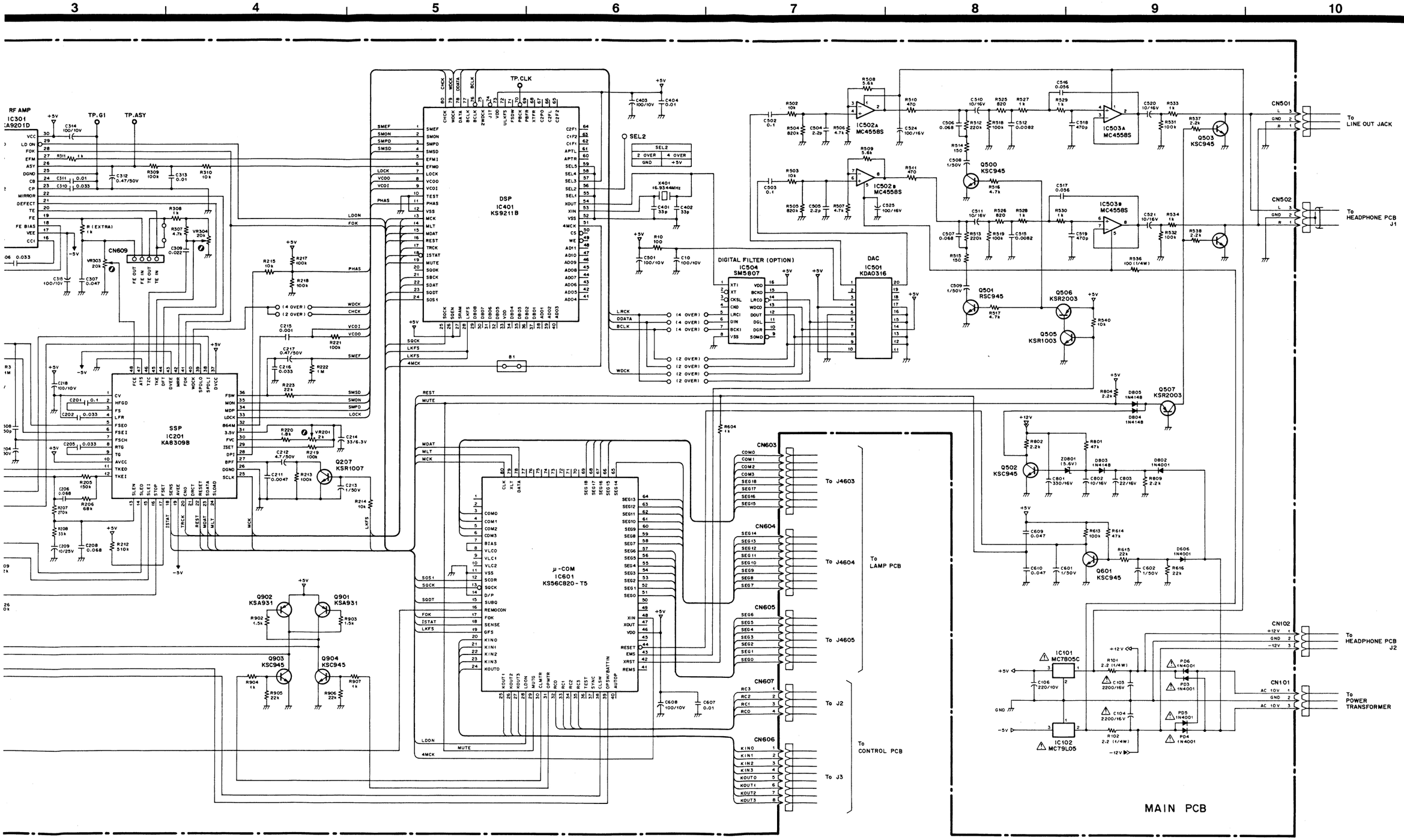


INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

NOTES:

1. Resistor values are in ohms (k=kilo-ohms, M=megohms).
2. Capacitor values are in microfarads (p=picofarads).
3. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.



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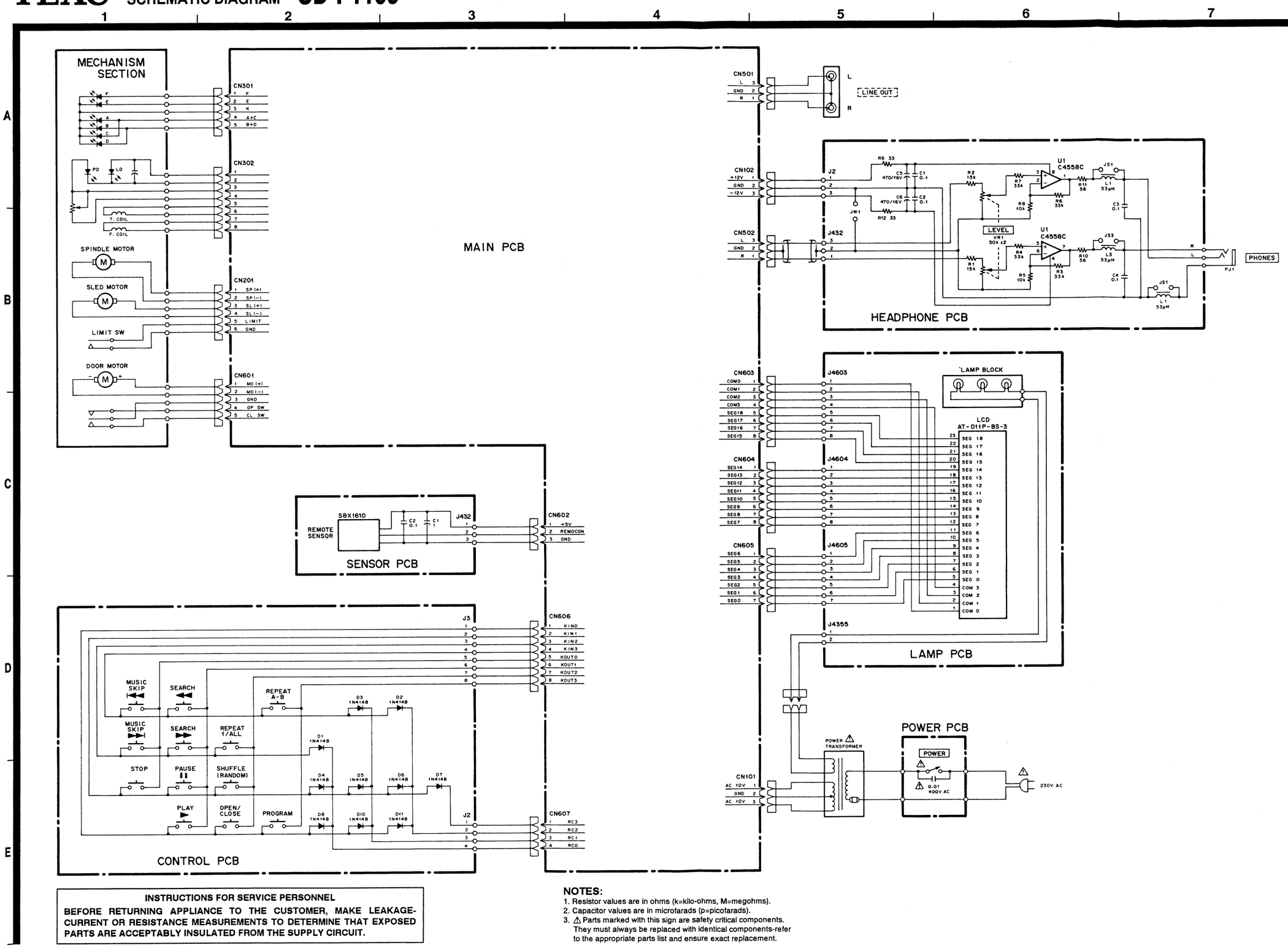
GE-
SED

CD-P1100

Compact Disc Player

1 st Issue; February 1996

TEAC SCHEMATIC DIAGRAM CD-P1100



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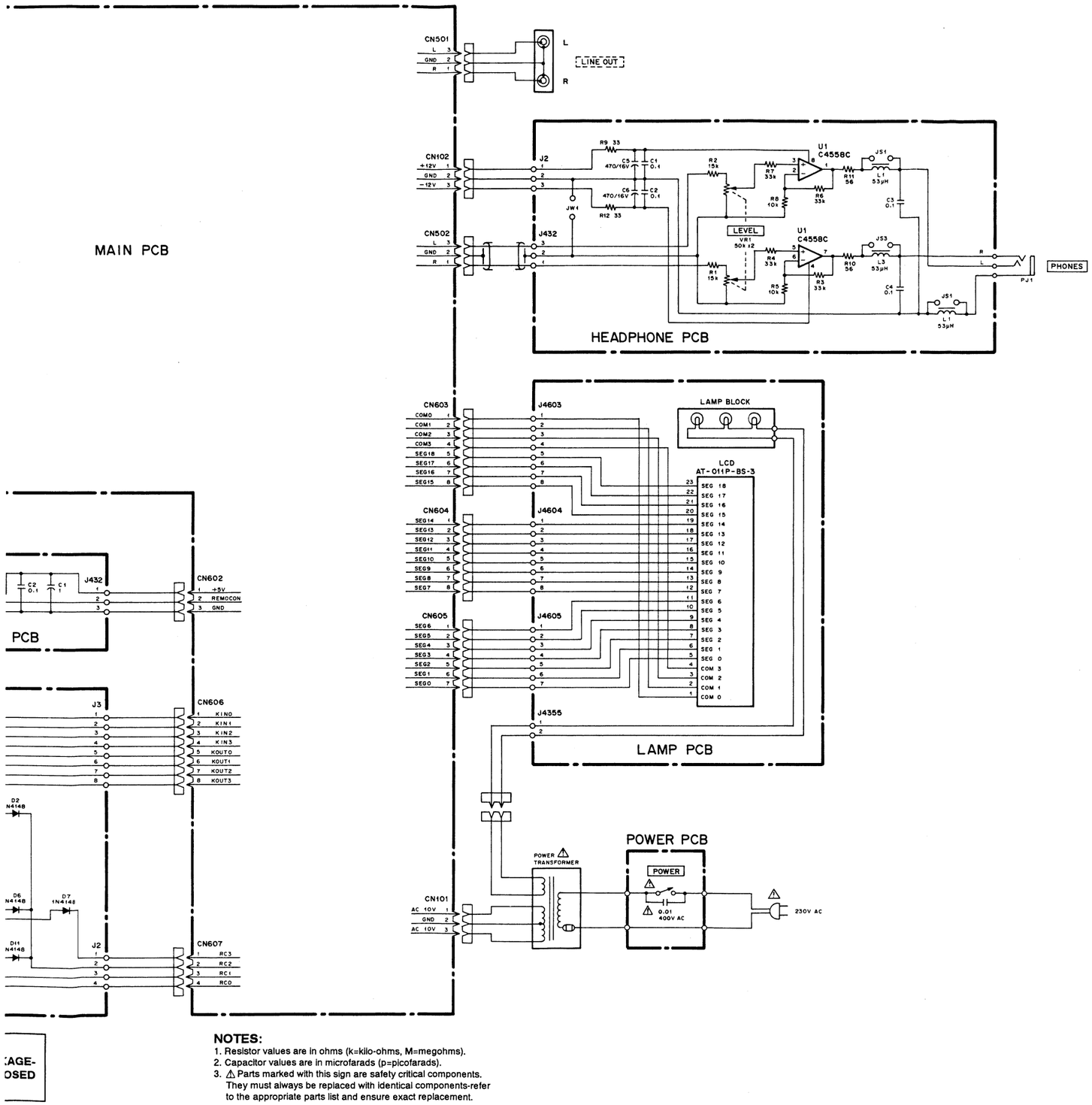

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